



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,687	06/19/2001	Steve K. Hsiung	5201-2430001-120	6374

7590 03/31/2003

Gary Goates
Patent Legal Department
MS D-106
1551 McCarthy Blvd.
Milpitas, CA 95035

EXAMINER

NGUYEN, TRUNG Q

ART UNIT PAPER NUMBER

2829

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/885,687

Applicant(s)

HSIUNG ET AL.

Examiner

Trung Q Nguyen

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some.* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Seko (U.S. 5,730,634).

As to claims 1, 4-5 and 12-13, Seko discloses in Figures 3-4 a test fixture comprising a table moveable and retainer 3 in a first direction (X or Y direction), wherein the table is adapted to secure a substrate 15 embodying a trace conductor via emitter electro 30 having opposing ends (not shown); a probe pin movable 22 in two direction perpendicular to the first direction via prober 4 of Figure 3 is moved down until probe pin (not shown) 22 is brought into contact with pad 27 of gate electrode 26 of Figure 4, wherein the probe pin is adapted to contact a first one of the opposing ends via contact points 25 wherein contact point 25 comprising ad 27 of gate electrode 26 as seen from (b) of FIG. 4.

As to claims 2-3, Seko discloses in Figure 3 is moved down until probe pin (not shown) 22 is brought into contact with pad 27 of gate electrode 26 of Figure 4, wherein the probe pin is adapted to contact a first one of the opposing ends via contact points

25 wherein contact point 25 comprising ad 27 of gate electrode 26 as seen from (b) of FIG. 4, wherein a test device not shown will receive signals from these needles.

As to claims 6 and 15, Seko discloses in Figures 3-4 an end opposite one end a surface 25 of Figure 4B of the trace conductor 30 is adapted to receive a probe needle 22, and wherein a test device (21-21, 28-29 of Figure 3) is coupled between the probe needle and the pin to produce the test result.

As to claims 7-8, Seko discloses in Figure 3, column 7, lines 1-37, wherein the test device (21-21, 28-29 of Figure 3) forwards stimuli and receives response during use for testing integrity, open or short circuit of the trace conductor.

As to claims 9-11 and 19, Seko discloses in Figure 6A, a pair of elongated walls and push plate via insulating support 51 secured to the table and extending orthogonal to each other. Seko further discloses a pair of X-direction rails 14 is provided on Y movable table 13. X movable table 15 is successively moved by a fixed pitch forwardly or backwardly in the X direction by a motor or the like under the guidance of X-direction rails 14. A pair of holding plates 16 for wafer 6 is provided on X movable table 15 and Wafer 6 are fixed by holding plates 16 pressed by screws.

As to claims 14-16, Seko discloses in Figures 3-6A method for the emission characteristic and the insulation characteristic of a field emission cold cathode will be

Art Unit: 2829

described. Wafer 6 having approximately 10,000 very small cold cathodes formed on one chip and having several tens of chips disposed in both of perpendicular XY directions in a matrix is placed in position onto X movable table 15. Prober 4 is moved upwardly and held there, and in this condition, Y movable table 13 and X movable table 15 are moved so that, for example, the left uppermost one of the chips of wafer 6 may be positioned just below prober 4.

As to claim 17, Seko discloses in Figure 4A and column 5, lines 18-39, a measuring electrical resistance via measuring unit 28-29 to measure the resistance of the trace conductor via emitter electro 30.

As to claim 18, Seko discloses in Figures 2 a step or removing grinding the integrated circuit via Inspection apparatus 2 is formed from XY movable table 3 for moving a wafer in perpendicular XY directions, and prober 4. Vacuum chamber 1 has door 5 through which wafer 6 can be placed into and removed from vacuum chamber 1 not shown.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seko (U.S. 5,730,634) in view of Lum et al. (U.S. 5,534,784).

Claim 20 adds the limitation wherein contacting the probe needle comprises a magnifying lens. However, Lum et al. disclose in Figure 7 and column 6, lines 1-11, contacting the probe needle comprises using a magnifying lens for aligning and contacting the probe needle via guide pins 88 may extend through guide holes 89 both within mounting plate 66 and probe card 62 to insure proper alignment between the various components of array probe assembly 60.

Therefore, at the time of the subject invention, it would have been obvious for a Claim*** allowed.

person of ordinary skill in the art to use the magnifying lens as taught by Lum et al. to place it into the probe needle 22 of Seko, because the magnifying lens give the advantage of aligning, improving the sensitivity and increasing system flexibility.

Response to Arguments

5. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection. Base upon the amending claims, the examiner is now introducing Seko (U.S. 5,730,634) to reject claims 1-19 and in addition with Lum et al. (U.S. 5,534,784) to reject claim 20, which covers what is/are claimed.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in the Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within two months of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trung Nguyen whose telephone number is 703-305-4925. The examiner can normally be reached on Monday through Friday, 8:30AM – 5:00PM. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cuneo Kammie can be reached at (703) 308-1233.

Application/Control Number: 09/885,687

Page 7

Art Unit: 2829

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

Trung Nguyen

Patent Examiner
Group Art Unit 2829
March 19, 2003



KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800